

REMARKS

I. Status of the Claims

Claims 1-32 are pending in the application.

Claims 1-3 and 31 have been examined and claims 4-30 and 32 have been withdrawn from consideration.

II. Status of the Drawings and Specification

The Examiner previously rejected the Figures 1-13 for not reciting the label "prior art". Applicants previously amended Figures 1-13 to recite "prior art" and the Examiner now rejects the specification. Applicants submit that Figures 1-4, 6-10 and 12-13 illustrate both the prior art and the present invention. Figures 1-4 schematically illustrate the features of the present invention. Since the figures are not to scale they incorporate the features of the present invention. Figures 6-10 and 12-13 illustrate the diffusion etching technique used both with the present invention and the prior art. Thus, Figures 6-10 and 12-13 illustrate features of the present invention. Accordingly, Applicants have only supplied formal drawing replacements for Figures 5 and 11 and have only amended the specification for those figures. No new matter has been added to either the Specification or Figures.

III. Rejections Under 35 U.S.C. § 102

Claims 1-3 and 31 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,944,986 to Zuel (hereinafter the “986 patent”). Claims 1-3 and 31 are rejected under

35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,120,605 to Zuel et al. (hereinafter the “‘605 patent”). The Examiner states that both the ‘986 and the ‘605 patents disclose openings of about 200 to about 600 angstroms in diameter. The Examiner admits that both the ‘986 and the ‘605 patents do not disclose a density of the skeletized structure or the dimension of the skeletized structure of about 100 to about 400 angstroms in diameter but contends that the method disclosed by the ‘986 and the ‘605 patents is substantially identical to the method of the present invention. Thus, the Examiner states that the skeletized structure of the ‘986 and the ‘605 patents are inherently substantially identical to the skeletized structure as claimed.

Applicants respectfully traverse the above rejection. The density of the skeletized structure is some of the novelty of the present invention. The surface structure claimed, “the density of said skeletized structure is about 50 to about 70 skeletized structures per 200 nanometers square of said surface”, enhances the cleanability and color of the glass product. The structure of the presently claimed invention keeps grease at the surface, allowing a mild glass cleaner (approximately 3% active ingredient, e.g. WINDEX) to remove the grease from the glass surface. Prior art glass, as disclosed in the ‘986 and the ‘605 patents, tends to trap grease in the openings and require high strength cleaners (approximately 65% active ingredient).

The method and composition used to produce the glass product as disclosed in the ‘986 patent and the ‘605 patent differs from the method and composition of the present invention and cannot form the glass product as presently claimed. The method and composition used to form the glass product of the ‘986 and ‘605 patents results in a skeletized structure that has approximately half the density of the skeletized structure as claimed. Figure 11 in the ‘986, the ‘605 and the present Specification are identical and disclose the skeletized structure of the glass product of the

'986 and the '605 patent. Figure 11 is to scale, as noted by the scale bar in the lower right hand corner of the photograph. The length of the scale bar equals 100 nm. Applicants submit hereto, as Exhibit A, a copy of the photograph of Figure 11. Exhibit A contains a square that is 200 nm x 200 nm, drawn to scale on the figure. The raised surfaces of the skeletized structure resemble white spheres in Figure 11. A count of the raised white spheres indicate only approximately 4 to 6 spheres per 200 nanometer length or a total of approximately 30 to 40 skeletized structures per 200 nanometers square. This density of the prior art glass is also disclosed on page 12, lines 24-25 of the Specification. Thus, the prior art glass disclosed in the '986 and the '605 patent does not contain every element of the presently claimed invention and does not anticipate claims 1-3 and 31.

Additionally, the difference in structure is apparent from the color of the glass of the claimed invention as opposed to the prior art. The presently claimed glass is "a purplish-brown to brown color (when viewed in daylight)." Specification, page 9, lines 27-28. Both the '986 and the '605 patents disclose glass having "a purplish-blue to blue color (when viewed in daylight)." '986 patent, column 6, lines 53-54 and '605 patent, column 6, lines 26-27. The surface structure of the glass product determines the color of the glass. See, Specification, page 9, line 22 to page 10, line 5, '986 patent, column 6, lines 43-62, and '605 patent, column 6, lines 15-35. The color of AR etched glass is known in the art as a key element in determining the surface structure of the AR glass. Unetched glass differs in chemical composition by source and requires the potency of the AR etching solution to be modified for each lot. Color is used as the basis for determining the proper potency of the acid etching solution. Accordingly, a claimed difference in the color of the glass is an indicator of a different method and structure of the AR etched glass. Thus, the method of the prior art cannot form the structure of the present invention.

Further, Applicants submit that the composition of the AR etching solutions used in the prior art and the present invention differ. The potency of AR etching solutions are changed by adding specific amounts of hydrofluoric acid or boric acid. The general range of etching potency is between plus 12 units or minus 12 units for both the prior art and the present invention. However, the exact potency of present invention is 2 units less than that of the prior art. Two units of potency, as known by those of ordinary skill in the AR etching arts, is a very large range. Two units of potency can produce vastly differently properties in the etched glass, for example, the skelitized structure of the glass and the color of the glass, as distinguished above.

Thus, the physical properties (i.e. density and color) are significant features of the claimed invention that are not present or inherent in the '986 and the '605 patents. The physical properties of the glass are changed from the prior art due to the change in the skeletized structure as claimed. Thus, the claims recite over the references.


CONCLUSION

Therefore, in view of the above amendments and remarks, it is respectfully requested that the application be reconsidered and that all pending claims be allowed and the case passed to issue.

If there are any other issues remaining which the Examiner believes could be resolved through either a Supplemental Response or an Examiner's Amendment, the Examiner is respectfully requested to contact the undersigned at the telephone number indicated below.

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Respectfully submitted,

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